

Travel Modelling Group

MEMORANDUM

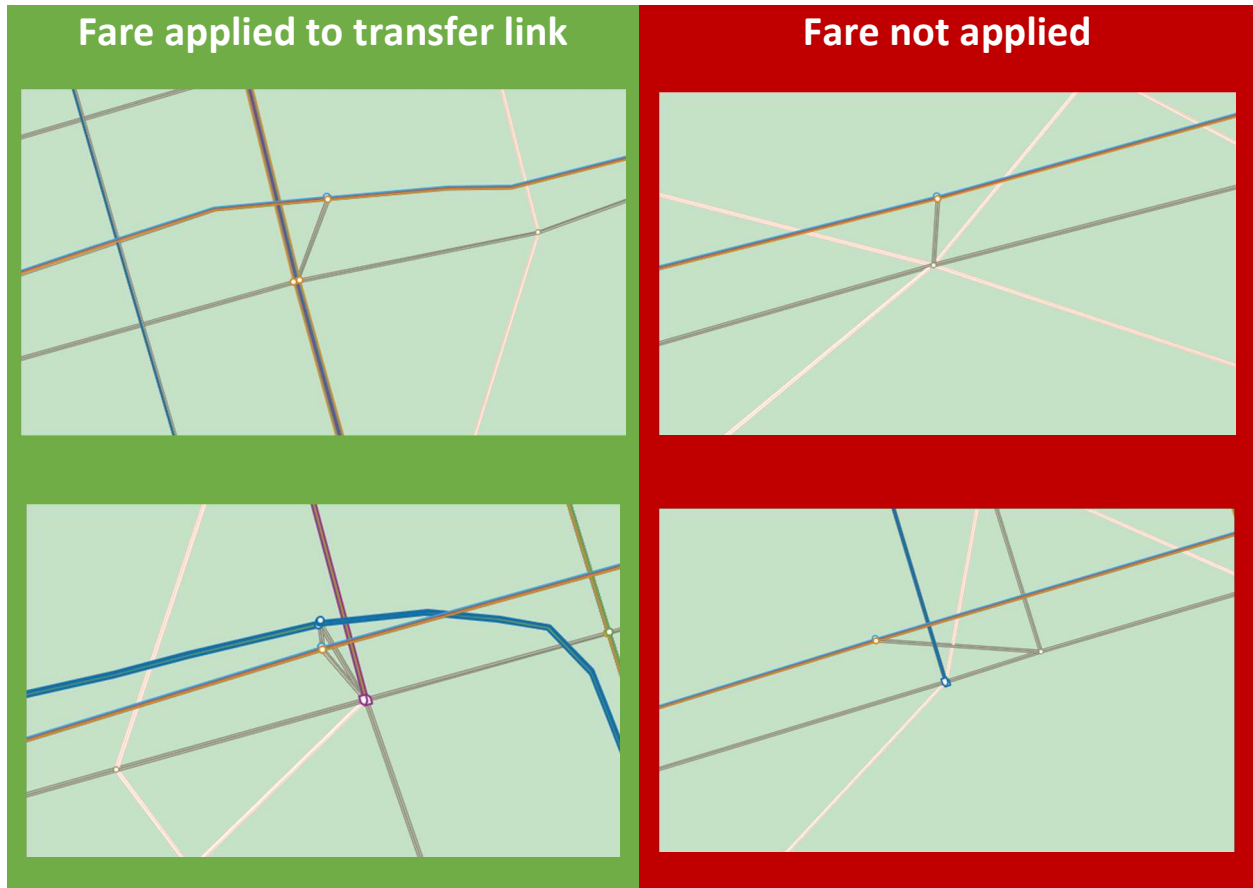
Date: September 9, 2016
Number: 2016-02
To: Technical Advisory Committee
From: Monika Nasterska
Subject: **Network Generation Update**

It has recently come to TMG's attention that two tools have been producing undesirable results for certain transit station transfer configurations. TMG has since fixed the problem, with the updated toolbox and XTMF modules now available on our website. The corresponding documentation has also been updated. However, users of GTAModel and TMG toolbox should be aware that the updated tools could produce different results from those generated previously. The change is expected to be localized, and pertains to the configurations described on the following pages.

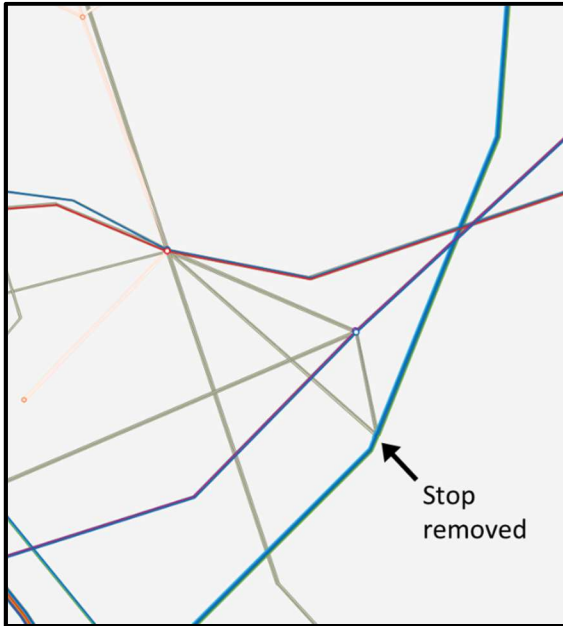
Please let us know if you find any issues or unexpected behaviour with these tools.

Hypernetwork/FBTN Generator:

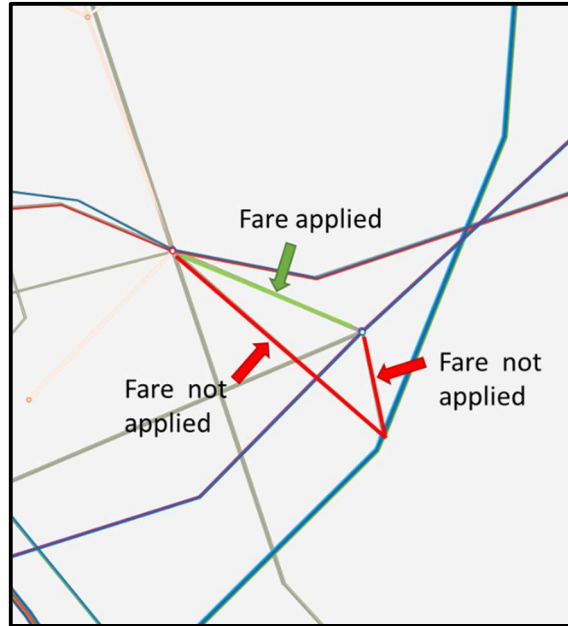
One of the functions of the hypernetwork generator is to apply correct fares to transfer links, in order to accurately represent either initial boardings or transfers. The hypernetwork/FBTN generation had not been adding fares to transfer links in the base network that did not connect to transit lines at both ends. For example, transfer links are often used to connect the subway to the road network. If that road network did not have any transit lines on it, a fare would not be applied (see below for examples). With the recent updates, that fare is now correctly applied.



Full Network Set Generator:



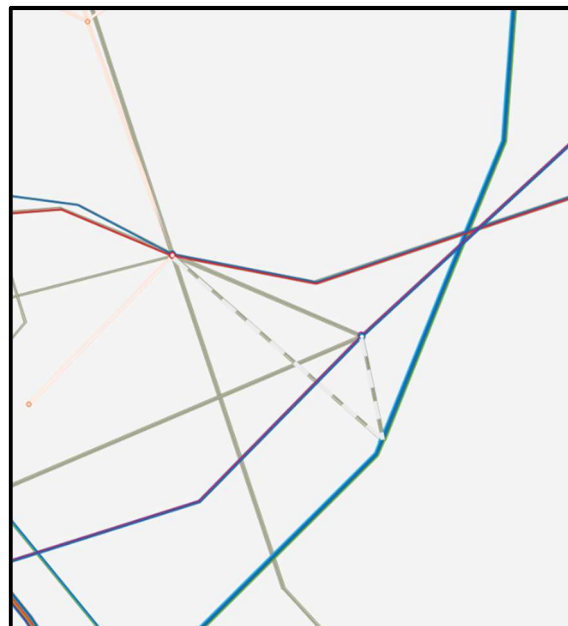
When modelling different transit configurations, sometimes stops are removed along transit lines. This can be problematic if these former stops have transfer links in the base network.



During hypernetwork generation, fares were not applied to the transfer links connecting to the former stop.



This allowed agents to bypass paying a fare by using the free transfer links.



This problem is solved in the Full Network Set Generator, which removes these unnecessary transfer links, by calling a new tool: Remove Extra Links. This tool can also be used on its own.